

**HEAT RECOVERY TECHNIQUE  
FOR CATALYST REGENERATOR FLUE GAS**

**ABSTRACT**

A technique for recovering heat from a high temperature effluent stream from catalyst regeneration or the like, comprising processes and means for:

(a) passing the effluent stream in heat exchange relationship in a steam generator with boiler feed water to produce high pressure steam and partially cool the effluent stream; (b) passing the partially cooled effluent stream from the steam regenerator in heat exchange relationship to preheat high pressure boiler feed water and further cool the effluent stream; and (c) passing the preheated boiler feed water to the steam generator. The apparatus and processes for thermal energy recovery may be used to treat hot regenerator effluent from FCC or OTO-type processes, thereby producing a cooled flue gas stream to discharge to ambient atmosphere.